

A CONSPECTUS OF PENTATOMINI OF THE WESTERN HEMISPHERE. PART 3 (HEMIPTERA: PENTATOMIDAE)

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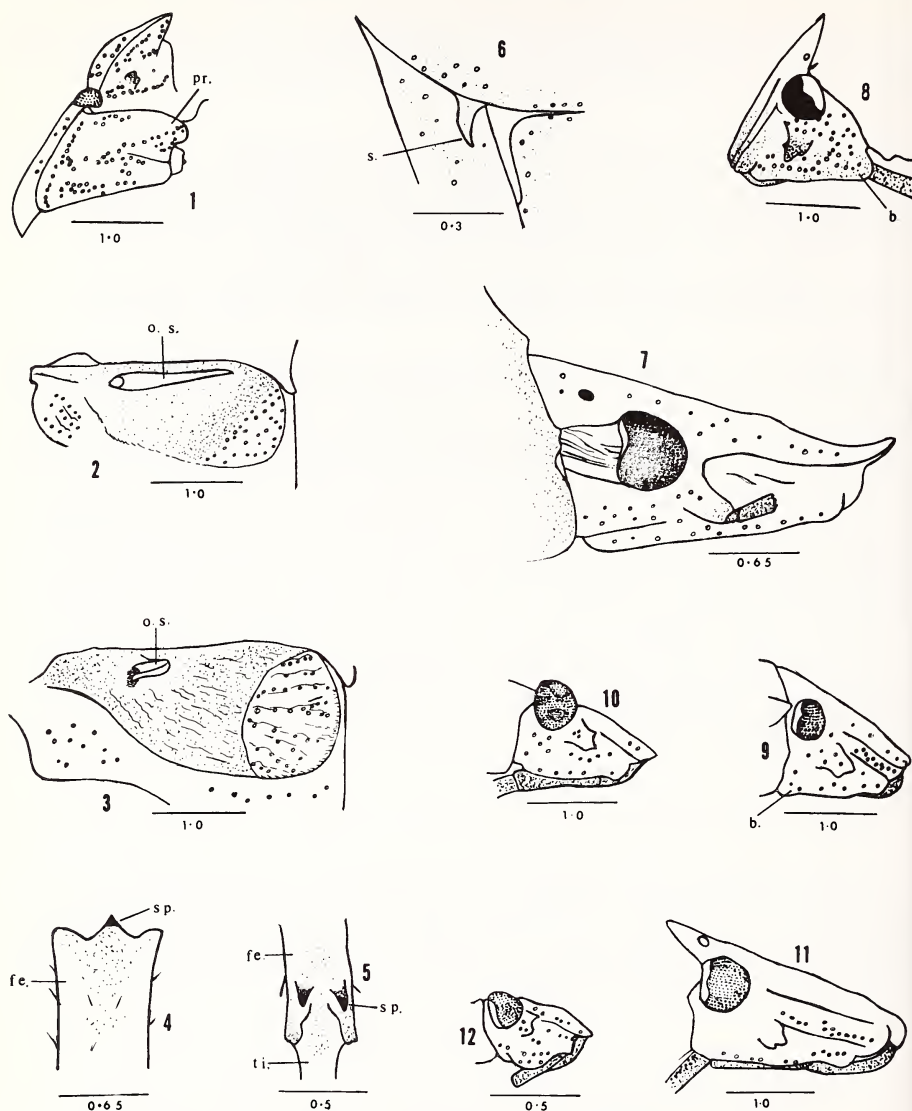
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Abstract.—A key is provided for those North American, Central American and West Indian genera of Pentatomini that do not have a basal tubercle or spine on the abdominal venter. *Pentatoma antiguensis* Westwood, *Thyanta bimini* Ruckes, *T. elegans* Malloch and *T. elegantula* Jensen-Haarup are transferred to *Cyptocephala* Berg from *Thyanta* Stål. *Tepa* Rolston and McDonald, new genus, is proposed for 6 species transferred from *Thyanta*: *Pentatoma rugulosa* Say, type species, *Thyanta brevis* Van Duzee, *T. jugosa* Van Duzee, *T. panda* Van Duzee, *T. punctiventris* Van Duzee and *T. yerma* Rolston. *Caribo* Rolston, new genus, is proposed for *C. subgibbus* Rolston, new species from the Bahamas, and *C. fasciatus* Rolston, new species from Jamaica and St. John, Virgin Islands. *Neurohalys* Bliven, 1960, is placed in the synonymy of *Prionosoma* Uhler, 1863, and *N. bucculatus* Bliven, 1960, in the synonymy of *P. podopioides* Uhler, 1863. *Thyanta* subgenus *Parathyanta* Jensen-Haarup, 1928, is a junior synonym of *Cyptocephala* Berg, 1883. *Phacidium euchlorum* Breddin, 1912, whose type locality was erroneously reported as Costa Rica, is a junior synonym of *Thyanta aeruginosa* Berg, 1878, a species known only from Argentina and Uruguay. A lectotype is designated for *Phacidium euchlorum* Breddin.

We have previously provided keys for those genera of Pentatomini of the Western Hemisphere which possess a spine or tubercle at the base of the abdominal venter (Rolston et al., 1980; Rolston and McDonald, 1981). This paper concerns those genera of Pentatomini that do not have such a spine or tubercle, but it is geographically restricted to exclude South America.

KEY TO GENERA

1. Margins of propleura before coxae produced, anterior margin covering base of head from eyes mesad nearly to rostrum (Fig. 1) 48
- Propleura not produced 2
- 2(1). Sulcus and/or ruga of various lengths extending laterad from metathoracic ostiole (Figs. 2, 3) 3
- Metathoracic ostiole unattended by sulcus or ruga 46
- 3(2). Superior surface of femora produced distally as stout spine (Fig. 4) 49
- Superior surface of femora unarmed distally, at most obtusely produced 4
- 4(3). Ostiolar ruga extending less than $\frac{2}{3}$ distance from mesial margin of ostiole to lateral margin of metapleuron, usually auriculate in form (Fig. 3) 5
- Ostiolar ruga extending $\frac{2}{3}$ or more of distance from mesial margin of ostiole



Figs. 1-12. 1. *Neottiglossa undata*. Propleural production and reflexion. 2. *Thyanta pallidovirens*. Ostiolar sulcus. 3. *Euschistus servus*. Auriculate ostiolar ruga. 4. *Loxa flavicollis*. Apical spine on superior surface of femur. 5. *Sibaria englemani*. Subapical spines on inferior surface of femur. 6. *Moromorpha tetra*. Spine on posterior angle of pronotum. 7. *Proxys punctulatus*. Eyes in relation to anterior pronotal margin. 8. *Hymenarcys nervosa*. Lobed type of bucculae. 9. *Hymenarcys aequalis*. Truncate type of bucculae. 10. *Agroecus griseus*. Buccula and first rostral segment, lateral view. 11. *Tibraca limbativentris*. Buccula and first rostral segment, lateral view. 12. *Galedanta myops*. Evanescent type of bucculae. Abbreviations: buccula (b); femur (fe); ostiolar sulcus (o.s.); propleural reflexion (pr.); pronotal spine (s); spine (sp.); tibia (ti.).

to lateral margin of metapleuron, usually bordering an elongate sulcus (Fig. 2) 34

5(4). At least anterior femora armed on inferior surface with one or more stout subapical spines (Fig. 5) *Sibaria*

– Femora unarmed or bearing low setose tubercles 6

6(5). Posterolateral angles of pronotum armed with small flat spine extending over base of each corium (Fig. 6) *Moromorpha*

– Posterolateral angles of pronotum unarmed 7

7(6). Eyes separated from pronotum by about ½ their diameter, their base striated between reticulation of eye and pronotum (Fig. 7) *Proxys*

– Eyes usually contiguous with pronotum, their base smooth 8

8(7). Width of scutellum at distal end of frena more than ½ of basal width, usually ¾ or more 9

– Width of scutellum at distal end of frena ½ or less of basal width 17

9(8). Bucculae lobed or truncate posteriorly (Figs. 8, 9) 12

– Bucculae evanescent or arcuate posteriorly (Figs. 10, 11) 10

10(9). First rostral segment projecting beyond bucculae (Fig. 10); 2 rows of small tubercles present on inferior surface of femora *Agroecus*

– First rostral segment lying entirely between bucculae (Fig. 11); inferior surface of femora lacking tubercles 11

11(10). Distance between ocelli less than ¾ width of head across eyes ... (in part) *Tibraca*

– Distance between ocelli more than ¾ width of head across eyes ... (in part) *Hymenarcys*

12(9). Superior surface of tibiae sulcate 13

– Superior surface of tibiae rounded 16

13(12). Anterior width of pronotum more than ½ width at humeri; coria scarcely or not surpassing apex of scutellum *Coenus*

– Anterior width of pronotum less than ½ width at humeri; coria usually extending well past apex of scutellum 14

14(13). Mesial margin of metathoracic ostiole V-shaped; head and usually pronotum with vesture of numerous long setae ... (in part) *Trichopepla*

– Mesial margin of metathoracic ostiole rounded; head and pronotum glabrous or with short, scattered setae 15

15(14). Metathoracic ostiole at right angle to plane of metapleuron, invisible from view perpendicular to metapleuron; ventral border of anterolateral pronotal margins punctate ... (in part) *Hymenarcys*

– Metathoracic ostiole inclined to plane of metapleuron but entirely visible from view perpendicular to metapleuron; anterolateral pronotal margins with obscurely punctate ventral border of uneven width *Codophila*

16(12). Body hirsute; first rostral segment lying entirely between bucculae .. *Prionosoma*

– Body glabrous; apex of first rostral segment projecting beyond bucculae *Cosmopepla*

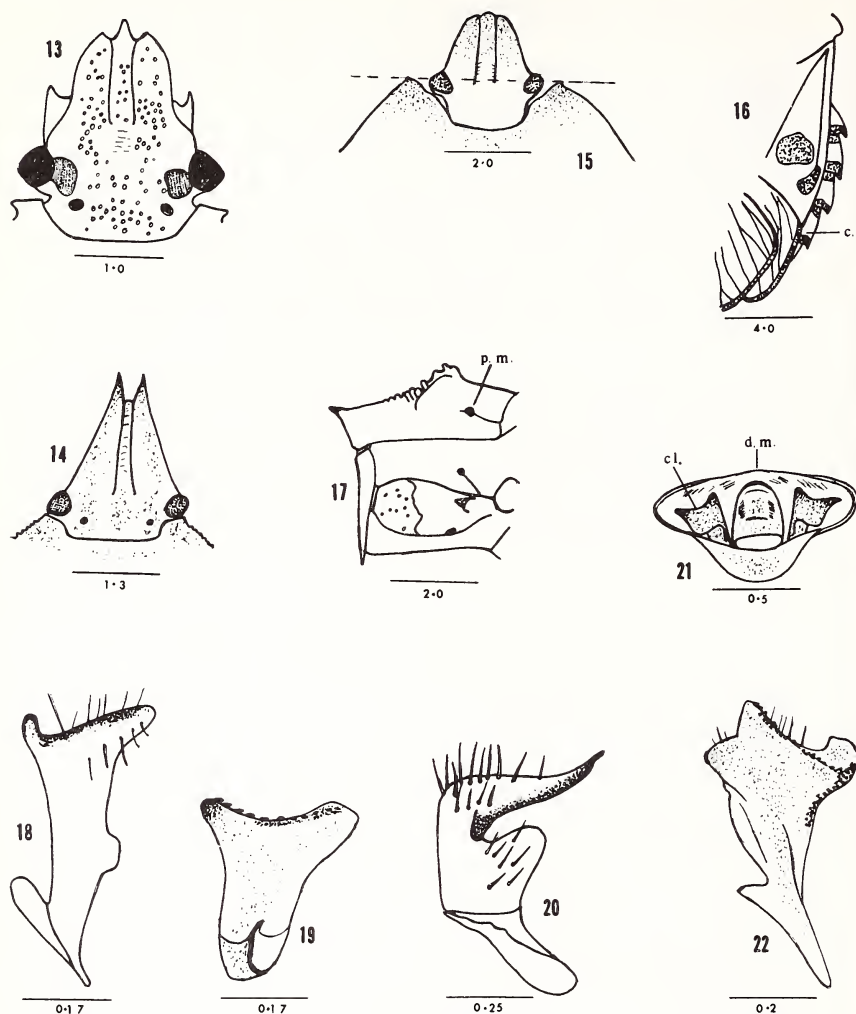
17(8). Bucculae lobed or abruptly truncated posteriorly (Figs. 8, 9) 18

– Bucculae evanescent or arcuate posteriorly (Fig. 12) 20

18(17). Juga projecting beyond tylus by at least width of tylus at apex, acute apically (Fig. 14) ... (in part) *Dichelops*

– Juga projecting little if at all beyond tylus, if angulate the angle a right or obtuse angle 19

19(18). Post-frenal portion of scutellum ¾ or more of scutellar length; green or stramineous dorsally; length 7.5 mm or less excluding hemelytral membranes ... (in part) *Tepa*, new genus



Figs. 13–22. 13. *Berecynthus delirator*. Head. 14. *Dichelops* sp. Head. 15. *Meneclis insertus*. Head and anterior pronotal margin. 16. *Runibia* sp. Connexivum and hemelytron. 17. *Euschistus bififormis*. Macules on thoracic pleura. 18. *Tepa rugulosa*. Paramere. 19. *Cytocephala antiguensis*. Paramere. 20. *Thyanta perditor*. Paramere. 21. *Cytocephala bimini*. Genital cup. 22. *Cytocephala bimini*. Paramere. Abbreviations: connexivum (c); paramere (cl); dorsal margin (d.m.); pleural macule (p.m.).

- Post-frenal portion of scutellum less than $\frac{2}{3}$ of scutellar length; black or brown dorsally; length without hemelytral membranes 8.5 mm or more *Padaeus*
- 20(17). Superior surface of tibiae sulcate for most of their length 23
- Superior surface of tibiae rounded for most of their length 21
- 21(20). Large species, about 18 mm long 23
- Moderate sized species, about 12 mm or less in length 22
- 22(21). Apex of first rostral segment projecting past bucculae *Mormidea*

-	First rostral segment lying entirely between bucculae	<i>Oebalus</i>
23(20,21).	Both juga and tylus angulate apically, a small incision separating each jugum from tylus at apex of head; tylus usually spinose and projecting well past juga (Fig. 13)	<i>Berecynthus</i>
-	Either juga or tylus or both juga and tylus obtuse apically	24
24(23).	Juga separated and acute apically, projecting beyond obtuse tylus; incision in apex of head expanding toward apex	25
-	Juga no longer than tylus, or longer than tylus but either contiguous apically or leaving a quadrate to rectangular incision in apex of head	26
25(24).	Connexiva marked with black spot or line at transverse sutures . . . (in part)	<i>Chlorocoris</i>
-	Connexiva immaculate . . . (in part)	<i>Dichelops</i>
26(24).	Juga longer than tylus, contiguous apically or leaving quadrate to rectangular incision in apex of head	27
-	Juga little or no longer than tylus	28
27(26).	Black tubercle present in each basal angle of scutellum; humeral angles obtusely rounded	<i>Galedanta</i>
-	Basal angles of scutellum lacking tubercle; humeral angles acute to spinose . . . (in part)	<i>Chlorocoris</i>
28(26).	Head deeply inserted into pronotum, imaginary line drawn across anterior limits of pronotum bisecting eyes near middle (Fig. 15)	<i>Menecles</i>
-	Imaginary line drawn across anterior limits of pronotum passing near posterior margin of eyes	29
29(28).	Lateral jugal margins strongly reflexed; antennae 4-segmented . . . (in part)	<i>Boea</i>
-	Lateral jugal margins not reflexed; antennae 5-segmented	30
30(29).	Costal angle of coria produced; lateral connexival margins strongly serrate (Fig. 16); bicolored species, orange with black markings . . . (in part)	<i>Runibia</i>
-	Costal angle of coria acute but not produced, lateral connexival margins entire or weakly serrate; not colored as above	31
31(30).	Metasternum moderately produced, sloping downward from anterior margin to hind coxae; rostrum not attaining metacoxae	<i>Hypatropis</i>
-	Metasternum nearly flat or shallowly sulcate, not produced; rostrum reaching between or beyond metacoxae	32
32(31).	Thoracic pleura with small black spot at base of each subcoxa (usually with additional spot at anterolateral angle of propleuron and at distal end of supra-coxal cleft on mesopleuron) and/or anterolateral margins of pronotum denticulate (Fig. 17)	<i>Euschistus</i>
-	Thoracic pleura immaculate or otherwise marked; anterolateral pronotal margins entire	33
33(32).	First and second antennal segments subequal in length; fovea in basal angles of scutellum deep, black . . . (in part)	<i>Tibraca</i>
-	First antennal segment shorter than second segment; fovea in basal angles of scutellum shallow, not black . . . (in part)	<i>Chlorochroa</i>
34(4).	Post-frenal portion of scutellum comprising 1/2 or more of scutellar length . . .	35
-	Post-frenal portion of scutellum less than 1/2 of scutellar length	37
35(34).	Juga neither contiguous nor markedly convergent apically . . . (in part)	<i>Trichopepla</i>
-	Juga contiguous or convergent before tylus	36
36(35).	Anterolateral margins of pronotum strongly concave	<i>Dendrocoris</i>
-	Anterolateral margins of pronotum weakly concave at most . . . (in part)	<i>Holcostethus</i>

- 37(34). Bucculae lobed or right-angularly truncate posteriorly; length of body 7.5 mm or less; parameres bilobed, without serrations between lobes (Fig. 18) . . . (in part) *Tepa*, new genus
- Bucculae evanescent or arcuate posteriorly, or if lobed length of body more than 10 mm; parameres not as above 38
- 38(37). Ostiolar ruga reaching $\frac{1}{2}$ or less of distance from inner margin of ostiole to lateral margin of metapleuron 39
- Ostiolar ruga reaching more than $\frac{1}{2}$ distance from inner margin of ostiole to lateral margin of metapleuron 41
- 39(38). Lateral jugal margins strongly reflexed; antennae 4-segmented; rostrum ending at metacoxae . . . (in part) *Boea*
- Lateral jugal margins not reflexed; antennae 5-segmented; rostrum reaching onto abdomen 40
- 40(39). Costal angle of coria produced; lateral connexival margins strongly serrate (Fig. 16) . . . (in part) *Runibia*
- Costal angle of coria not produced; lateral connexival margins entire or weakly serrate . . . (in part) *Chlorochroa*
- 41(38). Anterolateral margins of pronotum reflexed in part and/or rimmed *Arocera*
- Anterolateral margins of pronotum neither reflexed nor rimmed 42
- 42(41). Width of scutellum at distal end of frena $\frac{1}{2}$ or more basal width; hemelytral membranes fumose . . . (in part) *Holcostethus*
- Width of scutellum at distal end of frena $\frac{2}{3}$ or less width at base; hemelytral membranes vitreous 43
- 43(42). Jugal contiguous or convergent before tylus, or projecting beyond tylus by distance equal to or greater than apical width of tylus . . . (in part) . . . *Chloropepla*
- Jugal little or no longer than tylus 44
- 44(43). Anterolateral margins of pronotum vertically rounded; costal angle of coria reaching last connexival segment *Caribo*, new genus
- Anterolateral margins of pronotum carinate at least near humeri; costal angle of coria reaching penultimate connexival segment 44
- 45(44). Parameres bilobed with fine denticulations between two of lobes (Fig. 19); length including membrane usually less than 8 mm, rarely as much as 9 mm *Cyptocephala*
- Parameres simple, acute apically (Fig. 20); more than 8.5 mm in length *Thyanta*
- 46(2). Distal end of first rostral segment surpassing bucculae by distance subequal to rostral width at posterior limit of bucculae; brightly colored species . . . *Murgantia*
- First rostral segment not or scarcely projecting past bucculae; dull colored yellowish brown species 46
- 47(46). First segment of labium scarcely visible below bucculae from lateral view; width of scutellum at distal end of frena about $\frac{3}{5}$ width at base; last sternite of male much shorter than preceding sternites combined *Capivaccius*
- Distal portion of first labial segment largely visible below bucculae from lateral view; width of scutellum at distal end of frena about $\frac{2}{3}$ width at base; last sternite of male more than twice length at meson of preceding sternites combined *Pylophora*
- 48(1). Antennifer hidden from lateral view by anterior production of propleuron *Aelia*
- Antennifer not covered by anterior production of propleuron *Neottiglossa*
- 49(3). Last rostral segment lying entirely caudad of metacoxae and abdominal segments 3–5 shallowly sulcate mesially *Fecelia*

-	Last rostral segment lying partially between metacoxae, or if lying entirely caudad of metacoxae abdominal sulcus not extending onto sternite 5	49
50(49).	Ostiolar ruga extending more than $\frac{3}{5}$ of distance from mesial margin of ostiole to lateral margin of metapleuron . . . (in part)	<i>Chloropepla</i>
-	Ostiolar ruga extending $\frac{1}{3}$ or less of distance from mesial margin of ostiole to lateral margin of metapleuron	51
51(50).	Ostiolar ruga extending less than $\frac{1}{6}$ of distance from mesial margin of ostiole to lateral margin of metapleuron	<i>Loxa</i>
-	Ostiolar ruga extending $\frac{1}{4}$ to $\frac{1}{3}$ of distance from mesial margin of ostiole to lateral margin of metapleuron	<i>Mayrinia</i>

ANNOTATED LIST OF GENERA

1. *Aelia* Fabricius, 1803. Holarctic. One species in Western Hemisphere, *A. americana* Dallas, 1851.

2. *Agroecus* Dallas, 1851. Generic revision by Buckup (1957). One species in region covered, *A. griseus* Dallas, 1851.

3. *Arocera* Spinola, 1837. Revision by McDonald (1984).

4. *Berecynthus* Stål, 1862. One species in region covered, *B. delirator* (Fabricius, 1787).

5. *Boea* Walker, 1867. Redescribed by Kormilev (1950) as *Willinerinia*. One species in region covered, *B. costaricensis* Distant, 1890.

6. *Capivaccius* Distant, 1893. Monotypic, based on *C. bufo* Distant, 1893.

7. *Caribo* Rolston and McDonald, new genus. See following pages.

8. *Chlorochroa* Stål, 1872 (as subgenus of *Lioderma* Uhler). Holarctic. Generic synonymy, subgenus *Rhytidilomia*, and Opuntiae species group of nominate subgenus treated by Thomas (1982). Species of Sayi species group treated by Buxton et al. (1984).

9. *Chlorocoris* Spinola, 1837. Needs revision.

10. *Chloropepla* Stål, 1867. One species in Panama. Grazia (1980a) gives a key to species.

11. *Codophila* Mulsant, 1866 (as subgenus of *Carpocoris* Kolenati). Holarctic. Thomas (1974) gives diagnosis for genus, treats the 2 species in Western Hemisphere.

12. *Coenus* Dallas, 1851. Two species, *C. delius* (Say, 1832) and *C. inermis* Harris and Johnson, 1936.

13. *Cosmopepla* Stål, 1867. Generic review by McDonald (1984).

14. *Cyptocephala* Berg, 1883. See following pages.

15. *Dendrocoris* Bergroth, 1891 (as new name for *Liotropis* Uhler, 1877). Generic revision by Nelson (1955). This genus actually belongs in Section 2 (Rolston and McDonald, 1981). However, males of *D. humeralis* (Uhler, 1877) and *D. variegatus* Nelson, 1955, have no spine at base of abdominal venter.

16. *Dichelops* Spinola, 1837. Generic revision by Grazia (1978). One species in region covered, *D. bicolor* Distant, 1890.

17. *Euschistus* Dallas, 1851. Revision of Middle American species by Rolston (1974). Species in northeastern North America treated by McPherson (1982).

18. *Fecelia* Stål, 1872. Generic revision by Grazia (1976), corrections and one species added by Grazia (1980b) another by Eger (1980). The 4 species of *Fecelia* occur in the Greater Antilles.

19. *Galedanta* Amyot and Serville, 1843. Generic revision by Grazia (1967) modified by Grazia (1981). One species in region covered, *G. myops* (Fabricius, 1803).
20. *Holcostethus* Fieber, 1860 (= *Peribalus* Mulsant and Rey, 1866). Holarctic. Revision of Western Hemisphere components by McDonald (1975), revised key by McDonald (1982).
21. *Hymenarcys* Amyot and Serville, 1843. Generic review by Rolston (1973c).
22. *Hypatropis* Bergroth, 1891 (as new name for *Melpia* Stål, 1867). Needs revision. One unidentified species in region covered.
23. *Loxa* Amyot and Serville, 1843. Revision by Eger (1978).
24. *Mayrinia* Horvath, 1925. Revised by Grazia-Vieira (1972). One species occurs in the region covered, *M. variegata* (Distant, 1880).
25. *Meneclis* Stål, 1867. Revision by Rolston (1973b).
26. *Mormidea* Amyot and Serville, 1843. Revision by Rolston (1978).
27. *Moromorpha* Rolston, 1978. Monotypic, based on *Moromorpha tetra* (Walker, 1868).
28. *Murgantia* Stål, 1862. Needs review.
29. *Neottiglossa* Kirby, 1837. Holarctic. McPherson (1982) keys 4 of the 7 nominal American species. Needs revision.
30. *Oebalus* Stål, 1862. Revision by Sailer (1944), synonymy and checklist by Sailer (1957).
31. *Padaeus* Stål, 1862. Needs revision, of 6 nominal species apparently only 4 belong in this genus. These 4 are in region covered.
32. *Prionosoma* Uhler, 1863. Monotypic, based on *P. podopioides* Uhler, 1863. McPherson (1982) summarizes literature concerning this species. See following pages.
33. *Proxys* Spinola, 1837. Needs review.
34. *Pylophora* Van Duzee, 1923. Van Duzee (1923) described the 2 species. From Gulf of California region.
35. *Runibia* Stål, 1861. Needs review.
36. *Sibaria* Stål, 1872. Reviewed by Rolston (1976).
37. *Tepa* Rolston and McDonald, new genus. See following pages.
38. *Thyanta* Stål, 1862. Needs revision. *Thyanta antiguensis* (Westwood), *T. bimini* Ruckes, *T. elegans* Malloch, and *T. elegantula* Jensen-Haarup are transferred to *Cyptocephala* Berg, and *Thyanta rugulosa* (Say), *T. brevis* Van Duzee, *T. jugosa* Van Duzee, *T. panda* Van Duzee, *T. punctiventris* Van Duzee and *T. yerma* Rolston are transferred to *Tepa* Rolston and McDonald, new genus. See following pages.
39. *Tibraca* Stål, 1860. Needs revision.
40. *Trichopepla* Stål, 1867. Revised by McDonald (1976).

NEW GENERA, SPECIES, AND COMBINATIONS

Cyptocephala Berg, 1883

Cyptocephala Berg, 1883:209–210 (reprinted, 1884:25–26).

Crato Distant, 1893:457.

Thyanta subgenus *Parathyanta* Jensen-Haarup, 1928:186. **New Synonymy.**

Type species. Cyptocephala cogitabunda Berg, 1883.

Diagnosis. Metathoracic ostiole a fissure in metapleuron, not on notable elevation; ostiolar ruga sulcate proximally, reaching $\frac{7}{10}$ – $\frac{8}{10}$ distance from mesial margin of ostiole to lateral margin of metapleuron. Post-frenal portion of scutellum comprising about $\frac{2}{5}$ of scutellar length; scutellar width at distal end of frena about $\frac{2}{5}$ of basal width. Bucculae arcuately truncate at posterior termination; basal segment of rostrum not projecting beyond bucculae. Anterolateral margins of pronotum carinate, entire, neither reflexed nor rimmed.

Parameres bilobed or trilobed apically, minutely denticulate between anterior and lateral lobes (Figs. 21, 22).

Species. Species here transferred from *Thyanta* to *Cyptocephala* are: *Pentatoma antiguensis* Westwood, 1837, *Thyanta bimini* Ruckes, 1952, *Thyanta elegans* Malloch, 1919, and *Thyanta (Parathyanta) elegantula* Jensen-Haarup, 1928.

Comments. *Cyptocephala* differs from *Thyanta* and *Tepa* primarily in the lobed, denticulate parameres (Figs. 19, 22). In *Thyanta* the parameres are apically spinose or acute (Fig. 20); in *Tepa* the parameres have a thumb-like lateral lobe (Fig. 18); denticles are absent from the parameres of *Thyanta* and *Tepa*. The aedeagus is quite similar in these three genera, simple, and apparently of little taxonomic use.

The spermathecae of *Cyptocephala* species are not entirely uniform. In *C. antiguensis*, *C. bimini* and *C. elegans* there is an enlargement at the base of the proximal flange, but this structure is absent in *C. cogitabunda* and *C. elegantula* (Figs. 36–41). This enlargement is present and variously modified in the *Thyanta* species examined (Figs. 23–35); it is absent in *Tepa* species (Figs. 42–48). The membranous sac of the spermathecal duct does not dilate the full length of the enclosed sclerotized rod in *Cyptocephala* (Figs. 36–39), as it does in *Tepa* (Figs. 42, 43) and as it usually, but not always, does in *Thyanta* (Figs. 23–26).

New records for *C. bimini* are Cuba and Jamaica.

New records for *C. elegantula* are Catamarca, Córdoba and Tucumán provinces in Argentina.

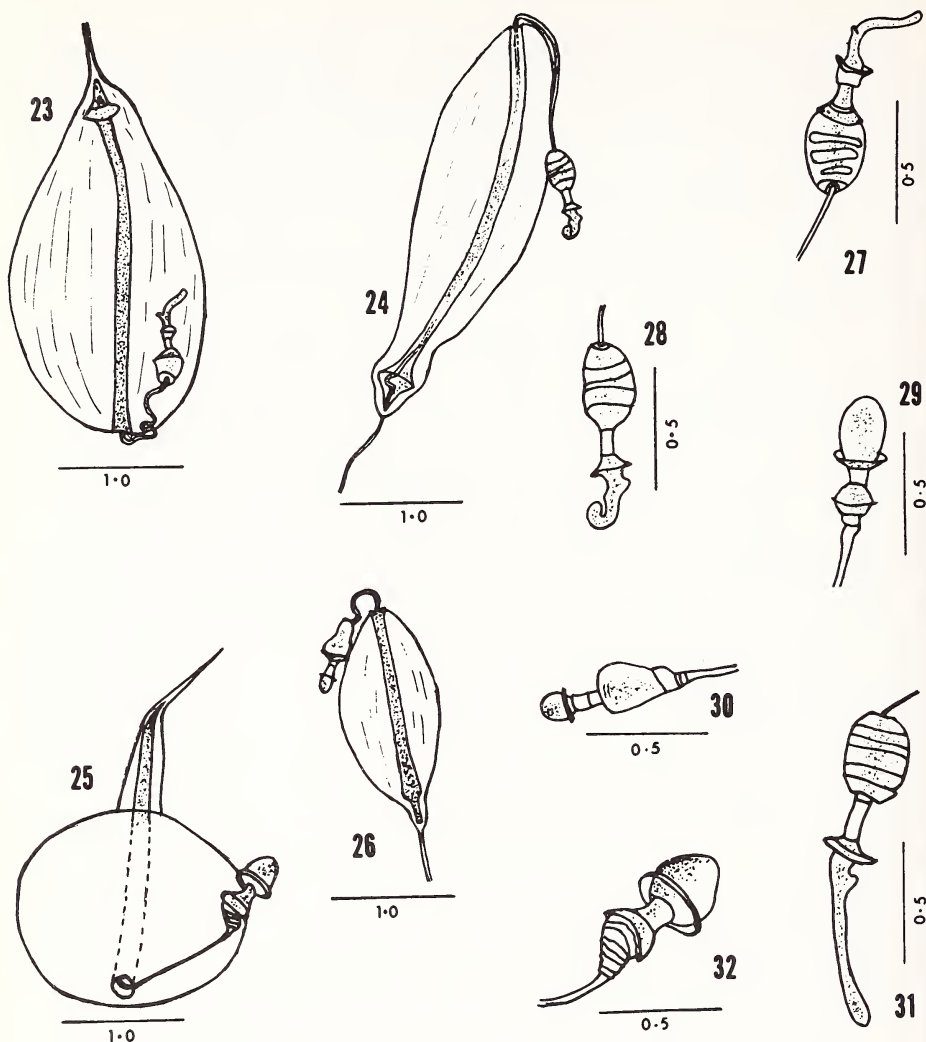
The holotypes of *Thyanta bimini* and *T. elegantula*, and a male and female homotype of *Cyptocephala cogitabunda* were examined. Type material of *Thyanta antiguensis* and *T. elegans* was not seen.

Tepa Rolston and McDonald, new genus

Type species. Pentatoma rugulosa Say, 1832.

Diagnosis. Metathoracic ostiole a fissure in metapleuron, not on notable elevation; ostiolar ruga sulcate proximally, reaching $\frac{2}{5}$ – $\frac{3}{5}$ distance from mesial margin of ostiole to lateral margin of metapleuron. Post-frenal portion of scutellum $\frac{2}{5}$ – $\frac{1}{2}$ of scutellar length; width of scutellum at distal end of frena $\frac{2}{5}$ – $\frac{1}{2}$ of basal width. Bucculae lobed or right-angularly truncate posteriorly. Parameres bilobed; dorsal lobe narrowly rounded; lateral lobe smaller, thumb-like, variously bent dorsad; denticles absent (Fig. 18). Spermathecal bulb hemispherical, base of proximal flange unmodified (Figs. 42–48). Length less than 7.5 mm excluding hemelytral membranes.

Species. Species transferred from *Thyanta* to *Tepa* are: *Pentatoma rugulosa* Say, 1832, *Thyanta brevis* Van Duzee, 1904, *Thyanta jugosa* Van Duzee, 1923, *Thyanta*

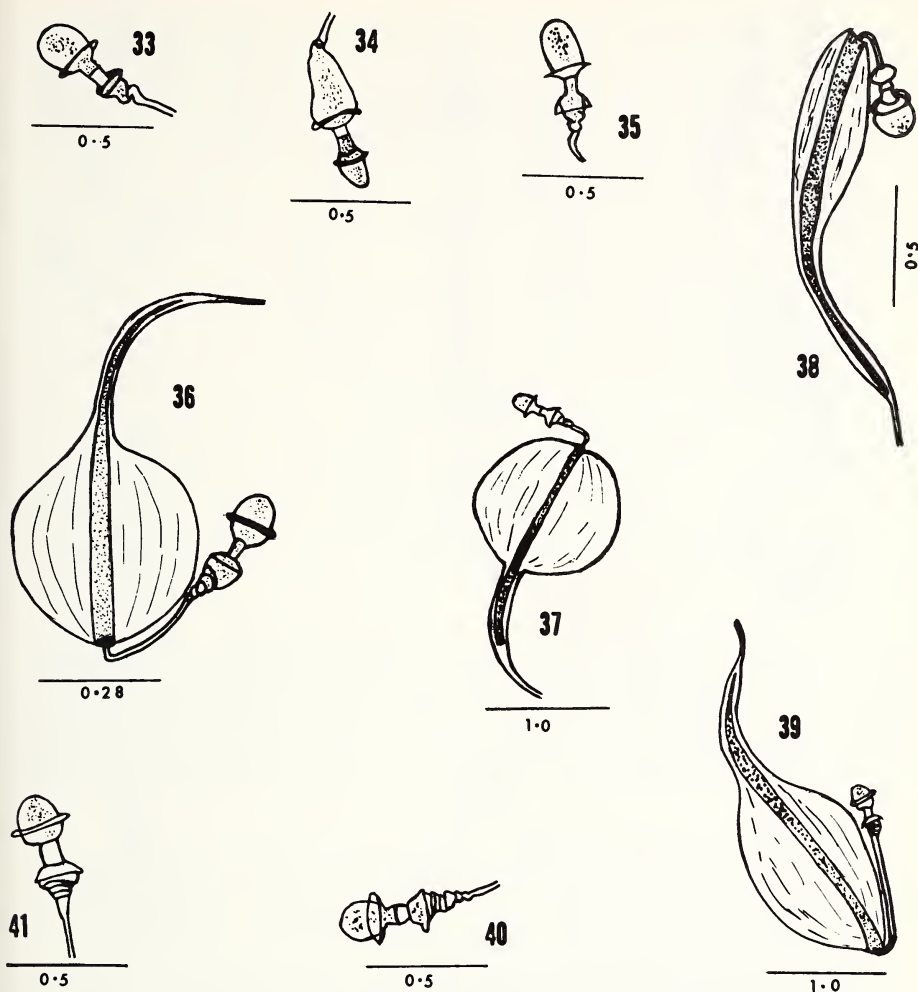


Figs. 23–32. 23–26. Spermatheca. 23. *Thyanta calceata*. 24. *T. custator*. 25. *T. patruellis*. 26. *T. pseudocasta*. 27–32. Spermathecal bulb and pump. 27. *Thyanta calceata*. 28. *T. custator*. 29. *T. maculata*. 30. *T. nitidula*. 31. *T. pallidovirens*. 32. *T. patruellis*.

panda Van Duzee, 1923, *Thyanta punctiventris* Van Duzee, 1904, and *Thyanta yerma* Rolston, 1972.

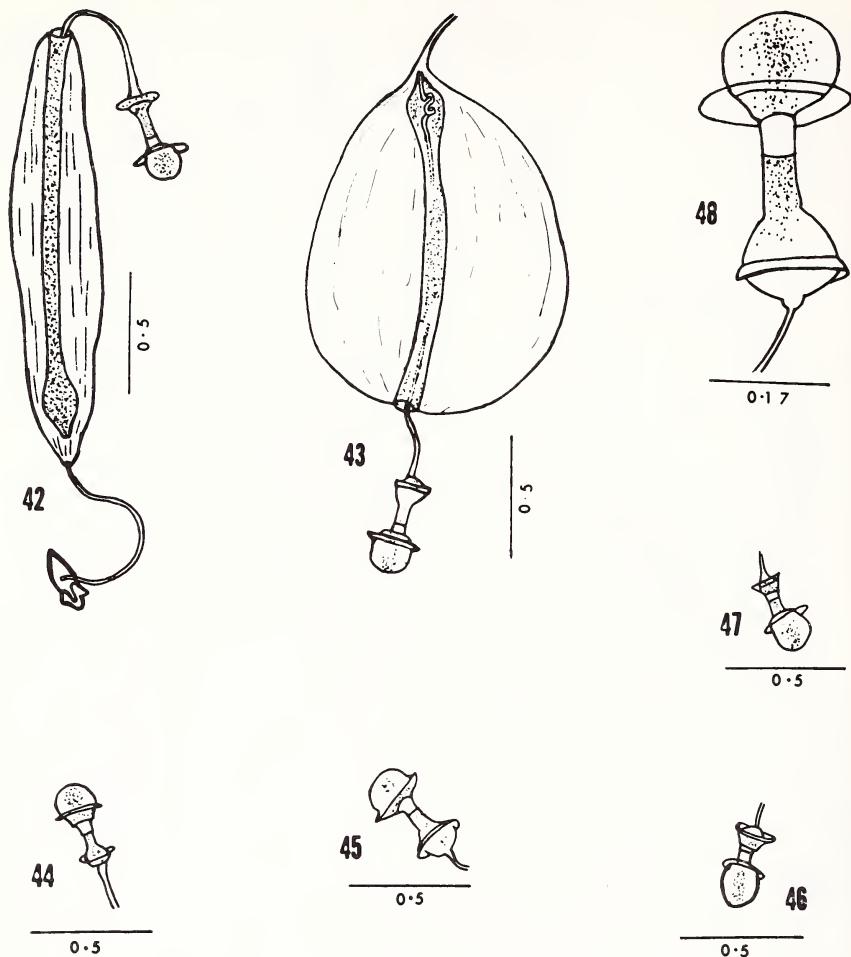
Comments. The species of *Tepa* are included in a key to the small North American species then considered to be in *Thyanta*, and the male genitalia are figured (Rolston, 1972).

Tepa differs from *Thyanta* and *Cyptocephala* primarily in the form of the para-



Figs. 33–41. 33–35. Spermathecal bulb and pump. 33. *Thyanta planifrons*. 34. *T. pseudocasta*. 35. *T. signoreti*. 36–39. Spermatheca. 36. *Cyptocephala antiguensis*. 37. *C. bimini*. 38. *C. cogitabunda*. 39. *C. elegans*. 40, 41. Spermathecal bulb and pump. 40. *Cyptocephala bimini*. 41. *C. elegans*.

meres. The parameres in *Thyanta* are acute or spinose apically (Fig. 22); in *Cyptocephala* they are bilobed with minute denticles between two of the lobes (Fig. 24). *Tepa* also differs from the *Thyanta* species known to us with the exception of *T. aeruginosa* Berg, and from *Cyptocephala* in having the posterior termination of the bucculae lobed or right-angularly truncate. The spermatheca in all *Tepa* species is simple without the enlargement that seems to be characteristic of *Thyanta* and *Cyptocephala* species other than *C. cogitabunda* and *C. elegantula*.



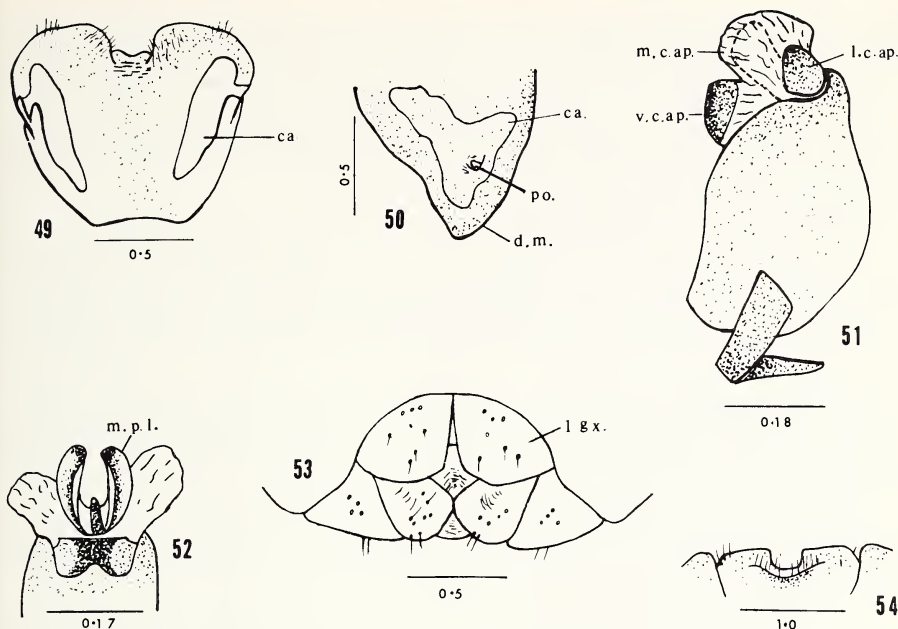
Figs. 42-48. 42, 43. Spermatheca. 42. *Tapa rugulosa*. 43. *T. yerma*. 44-48. Spermathecal bulb and pump. 44. *Tapa brevis*. 45. *T. jugosa*. 46. *T. panda*. 47. *T. punctiventris*. 48. *T. yerma*.

Tapa is confined to the western U.S.A. and northern Mexico with the exception of *T. panda* which is recorded from California, Curaçao and Florida.

Caribo Rolston, new genus

Type species. Caribo subgibbus Rolston, new species.

Diagnosis. Metathoracic ostiole inclined to plane of metapleuron; ostiolar ruga sulcate proximally, extending from mesial margin of ostiole slightly more than $\frac{1}{2}$ - $\frac{3}{5}$ of distance to lateral margin of metapleuron. Jugal no longer than tylus, their lateral margins not reflexed. First antennal segment not reaching apex of head. Bucculae evanescent posteriorly; basal segment of rostrum projecting beyond bucculae by less



Figs. 49–54. 49–53. *Caribo subgibbus*. 49. Pygophore, ventral view. 50. Pygophore, lateral view. 51. Aedeagus, lateral view. 52. Aedeagus, ventral view. 53. Genital plates, caudoventral view. 54. *Caribo fasciatus*. Pygophore, ventral view. *Abbreviations*: cavity (ca.); dorsal margin (d.m.); basal plates (l.g.x.); lateral conjunctival appendage (l.c.ap.); median conjunctival appendage (m.c.ap.); median penial lobes (m.p.l.); orifice (po.); ventral conjunctival appendage (v.c.ap.).

than thickness of segment at apex; second rostral segment reaching mesocoxae. Anterolateral margins of pronotum rounded vertically, lacking distinct carinae except at humeri, entire. Post-frenal part of scutellum about $\frac{2}{3}$ of scutellar length; scutellar width at distal end of frena nearly $\frac{1}{2}$ of basal width; length and width of scutellum subequal. Costal angle of each corium extending to last connexival segment. Prosternum longitudinally sulcate; mesosternum feebly carinate mesially; metasternum weakly concave. Femora unarmed; superior surface of tibiae flattened, obscurely sulcate. Length less than 7.5 mm without hemelytral membranes.

Small orifice in lateral surface of pygophore on each side exposed only when pygophore partially extracted (Fig. 50), opening into large internal cavity (Fig. 49).

Comments. The pair of cavities opening on the lateral pygophoral surfaces have not been reported previously in pentatomids.

Caribo subgibbus Rolston, new species

Figs. 49–53

Description. Pale stramineous above and below; punctation irregular, fuscous to black. Markings on head consisting of irregular fuscous to black longitudinal bands on lateral margins of tylus basally, lateral margins of slightly elevated vertex from

base of head to eye (enclosing ocellus) on each side. Cicatrices outlined in black, thickly so except anteriorly. Patches on subgibbous base of scutellum densely punctate, black, irregular in form. Punctures on ventral disk of abdomen black, sparse, variable in size, a few quite large; punctation along lateral borders small, rather uniform, many concolorous with background. Spots on legs variable in size, coalescing into irregular incomplete preapical band on femora; distal end of tibiae and tarsi infusate.

Jugal margins briefly parallel between anteocular concavity and rounded apex of head; juga not convergent; tylus broadened at apex. Width of head across eyes 1.5 mm, length 1.3–1.5 mm. Antennal segments 0.3–0.4, 0.6–0.7, 0.5–0.6, 0.7, 0.7–0.8 mm long; distal $\frac{3}{4}$ of segment 5, distal $\frac{1}{2}$ of segment 4, sometimes distal $\frac{1}{3}$ of segment 3 dark. Rostrum reaching onto sternite 4 (3rd visible); segments 2–4 about 1.0, 0.7–0.8, 0.6–0.7 mm long.

Anterior submargin of pronotum depressed; cicatrices elevated; additional irregularities in anterior pronotal disk. Thin impunctate line divides pronotum at meson. Humeral angles somewhat produced laterad, rounded. Pronotal width across humeri 3.6–3.8 mm; mesial length 1.4–1.5 mm.

Basal $\frac{2}{3}$ of scutellum subgibbous; fovea in basal angles triangular, shallow, black. Membranes of hemelytra projecting well beyond body, vitreous, each of 5 veins in fumose band.

Abdominal sternites 3–4 and 5 basally with shallow longitudinal sulcus mesially. Spiracles nearly concolorous with surrounding area of sternite. Posterolateral and anterolateral angles of sternites with small black macule. Length of body 5.2–5.5 mm excluding hemelytral membranes.

Posterior margin of each basal plate convexly arcuate (Fig. 53). Gonocoxae 2 diamond shaped, broader than long, carinate mesially. Surface of paratergites 9 concave, especially so adjacent to gonocoxae 2; their posterior margin broadly convex. Sternite 10 small, triangular. Sternite 7 of female bearing large fuscous macule mesially at base.

Pygophore with U-shaped mesial emargination in posterior margin, black mesial macule at anterior margin; posterior border bearing fringe of long setae (Fig. 49). Ventral conjunctival appendages sclerotized apically, forming plate (Figs. 51, 52); lateral appendages sclerotized, medial appendages membranous.

Holotype. ♂, labeled "Bahamas:Mayaguana Isl. (3 words inked out) 28-VIII-63. C. Murvosh. Blacklight trap." Deposited in the Florida State Collection of Arthropods.

Paratypes. ♀, labeled as holotype, deposited with holotype; ♂ labeled as holotype, deposited in senior author's collection.

***Caribo fasciatus* Rolston, new species**

Fig. 54

Description. Light stramineous above and below, appearing brown dorsally from dense fuscous to black punctation. Pronotum traversed dorsally between cicatrices and humeri by stramineous fascia with sparse fuscous punctation. Cicatrices mostly black. Base of head, lateral margins of vertex and base of tylus densely black punctate. Ivory callus present on mesopleura about $\frac{1}{3}$ distance from lateral margin; another irregularly shaped and sparsely dark punctate callus in posterolateral corner of meta-

pleura. Punctures on ventral disk of abdomen of various sizes, some quite large; punctures along lateral borders small, more nearly uniform in size. Each abdominal sternite bearing black dot at anterolateral and posterolateral corners. Legs sparsely dotted with black; distal end of tibiae and tarsi infusate.

Jugal margins subparallel between anteocular concavity and rounded apex of head. Width of head across eyes 1.8–2.0 mm, length 1.5–1.7 mm. Antennal segments about 0.4, 0.7, 0.7–0.8, 1.0, 1.1 mm long; distal $\frac{3}{4}$ of last antennal segment dark, remainder of antennae pale. Rostrum reaching sternite 4 (3rd visible); length of segments 2–4 about 1.2, 0.7–0.9, 0.7–0.9 mm.

Anterolateral margins of pronotum concave. Humeri moderately produced laterad, narrowly rounded. Cicatrices somewhat elevated; pronotal disk otherwise smooth excepting shallow depression anterior to cicatrices. Width across humeri 4.7–5.4 mm; mesial length 1.7–2.0 mm.

Scutellum 2.8–3.3 mm wide at base, 2.7–3.2 mm long. Fovea in basal angles shallow, small, triangular. Four ill-defined clusters of punctures evenly spaced along base, similar in size to foveae. Scutellar disk evenly convex. Hemelytral membranes vitreous with fumose mottling along 7–8 veins, projecting well past abdominal apex.

Abdominal sternite 3 and base of 4 shallowly sulcate mesially. Spiracles black.

Length of body 6.5–7.4 mm excluding membranes.

Genital plates similar to those of *C. subgibbus*. Sternite 7 bearing large black macule mesially at base.

Posterior margin of pygophore truncate with small U-shaped mesial notch; black mesial macule present at base (Fig. 54).

Holotype. ♂, labeled "Antilles:Jamaica. Falmouth. July 19, 1960. C. & P. Vaurie." Deposited in the American Museum of Natural History.

Paratype. ♀ labeled (a) "Virgin Is:St. John, Est. Carolina, NW of Coral Bay, 31 May 1982, 250 ft" (b) "at ultraviolet light, W. B. Muchmore." Deposited in senior author's collection.

ADDITIONAL NEW SYNONYMY

Prionosoma Uhler, 1863

Prionosoma Uhler, 1863:363–364.

Neurohalys Bliven, 1960:34. **New Synonymy.**

Prionosoma podopioides Uhler, 1863

Prionosoma podopioides Uhler, 1863:364–365.

Neurohalys bucculatus Bliven, 1960:34–36, Pl. 5, figs. 1, 1a. **New Synonymy.**

The type of *N. bucculatus*, type species of *Neurohalys*, in the California Academy of Sciences, was examined. It is an unremarkable example of *Prionosoma podopioides*.

Thyanta aeruginosa Berg, 1878

Thyanta aeruginosa Berg, 1878:24.

Phacidium euchlorum Breddin, 1912:92–93. **New Synonymy.**

The type series of *Phacidium euchlorum*, in the Université Louis Pasteur, Strasbourg, France, was compared with specimens determined by H. Ruckes, one of them designated a homotype, as *Thyanta aeruginosa* Berg. Without doubt *Phacidium euchlorum* and *Thyanta aeruginosa* are synonyms of this quite distinctive species from Argentina and Uruguay. The purported provenance of the type series of *P. euchlorum*, Costa Rica, is obviously erroneous.

The type series of *P. euchlorum* consists of 2 males and 1 female, all labeled "Costa-Rica, San-Jose" (in error) above a red label bearing "Type." A male, here designated lectotype, bears an additional label, presumably inscribed by Breddin with "Phacidium euchlorum Bredd. n. gen. n. sp., typus" (the "t" in typus is not crossed). Pronotal width of this specimen is 3.45 mm. The smaller male, pronotal width 3.25 mm, and female are paralectotypes.

This species appears to be somewhat aberrant among other *Thyanta* species known to us, and once *Thyanta* is revised *Phacidium* may stand as a valid generic or subgeneric name. The species synonymy is mentioned now to resolve the previously vexing question as to the identity of *P. euchlorum*.

ACKNOWLEDGMENTS

We are indebted to Drs. N. Møller Andersen (Universitetets Zoologiske Museum), P. H. Arnaud (California Academy of Sciences), H. Dodge Engleman, Richard C. Froeschner (U.S. National Museum), Michael A. Ivie (Ohio State University), J. Matter (Université Louis Pasteur), Frank W. Mead (Florida State Collection of Arthropods), Luis de Santis (Universidad Nacional de LaPlata), Randall T. Schuh (American Museum of Natural History), and Donald B. Thomas for the loan of specimens relevant to this work. We are especially grateful to Drs. Joseph E. Eger, H. Dodge Engleman, J. E. McPherson and Donald B. Thomas for critically reviewing the manuscript. Any errors or obfuscations that may have crept into the revision are entirely the authors. Dr. Jocélia Grazia compared the female specimen of *Cyptocephala cogitabunda* Berg with the holotype.

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Received October 31, 1983; accepted January 23, 1984.